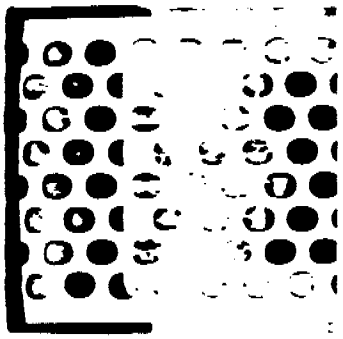
SUBCHAPTER 4. CONTROL AND PROHIBITION OF PARTICLES FROM COMBUSTION OF FUEL

Authority

Unless otherwise expressly noted, all provisions of this subchapter were adopted pursuant to authority of N.J.S.A. 26:2C-1 et seq. and were filed on January 27, 1972, as R.1972 d.16 to become effective on March 27, 1972. See: 3 N.J.R. 248(a), 4 N.J.R. 23(b). Revisions to this subchapter were filed on August 5, 1977, as R.1977 d.284 to become effective on October 12, 1977. See: 8 N.J.R. 375(a), 9 N.J.R. 420(a).



7:27-4.1 Definitions

The following words and terms, when used in this subchapter, shall have the following meanings unless the context clearly indicates otherwise.

"Air contaminant" means solid particles, liquid particles, vapors or gases which are discharged into the outdoor atmosphere.

"Control apparatus" means any device which prevents or controls the emission of any air contaminant.

"Department" means the Department of Environmental Protection.

"Direct heat exchanger" means equipment in which heat from the combustion of fuel is transferred to a substance being heated so that the latter is contacted by the products of combustion and may contribute to the total effluent.

"Equipment" means any device capable of causing the emission of an air contaminant into the open air and any stack, chimney, conduit, flue, duct, vent or similar device connected or attached to, or serving the equipment. This shall include equipment in which the preponderance of the air contaminants emitted is caused by the manufacturing process.

"Fuel" means solid, liquid or gaseous materials used to produce useful heat by burning.

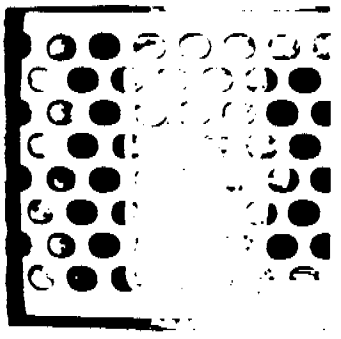
"Heat input rate" means the rate at which the aggregate heat content based on the higher heating value of the fuel is introduced into the fuel burning equipment.

"Isokinetic" means a method for sampling air contaminants from the gas stream in a stack or chimney in such a manner that the gas stream enters a sampling probe in the same direction and at the same velocity as the gas stream in a stack or chimney.

"Liquid particles" means particles which have volume but are not of rigid shape and which upon collection tend to coalesce and create uniform homogeneous films upon the surface of the collecting media.

"Manufacturing process" means any action, operation or treatment embracing chemical, industrial, manufacturing, or processing factors, methods or forms including, but not limited to, furnaces, kettles, ovens, converters, cupolas, kilns, crucibles, stills, dryers, roasters, crushers, grinders, mixers, reactors, regenerators, separators, filters, reboilers, columns, classifiers, screens, quenchers, cookers, digesters, towers, washers, scrubbers, mills, condensers or absorbers.

"Marine installation" means equipment for propulsion, power or heating on all types of marine craft and floating equipment.



"Maximum allowable emission rate" means the maximum amount of air contaminant which may be emitted into the outdoor air at any instant in time or during any prescribed interval of time.

"Particles" means any material, except uncombined water, which exists as liquid particles or solid particles at standard conditions.

"Performance test principle" means a concept of measurement as required for determining compliance with a specific standard for the emission of air contaminants.

"Sampling train" means a combination of entrapment devices, instruments, and auxiliary apparatus arranged in a prescribed sequence to selectively separate and collect samples of specified air contaminants.

"Solid particles" means particles of rigid shape and definite volume.

"Stack or chimney" means a flue, conduit or opening designed, constructed, and/or utilized for the purpose of emitting air contaminants into the outdoor air.

"Standard conditions" means or shall be 70 degrees Fahrenheit and one atmosphere pressure (14.7 psia or 760 mm Hg).

7:27-4.2 Standards for the emission of particles

(a) No person shall cause, suffer, allow or permit particles arising from the combustion of fuel to be emitted from any stack or chimney into the outdoor air in excess of the maximum allowable emission rate set forth in the following table. For a heat input rate between any two consecutive rates shown, the maximum allowable emission rate shall be determined by interpolation:

Heat Input Rate (Millions of British Thermal Units per Hour)	Maximum Allowable Emission Rate (Pounds per Hour)	Heat Input Rate (Millions of British Thermal Units per Hour)	Maximum Allowable Emission Rate (Pounds per Hour)
1	00.6	200	20
10	06	400	40
20	08	600	60
30	09	800	80
40	10	1,000	100
50	11	2,000	200
60	12	3,000	300
70	13	4,000	400
80	14	5,000	500
90	14.5	6,000	600
100	15	7,000	700
120	16.5	8,000	800
140	17.5	10,000	1,000
160	18.5		
180	19.3		

Note: Heat input rate shall be the sum of the heat input rates of all fuel burning equipment discharging through a single stack or chimney.

7:27-4.3 Performance test principle

(a) For purposes of measuring emissions in accordance with the provisions of this subchapter, particles shall be drawn by isokinetic procedures from the stack or chimney and the weight of the particles determined gravimetrically after removal of uncombined water.

(b) The measured emission weight shall be the combined weight of all particles collected and analyzed in accordance with the sampling and analytical procedures set forth in N.J.A.C. 7:27B-1.1 et seq.

7:27-4.4 Emission tests

(a) Any person responsible for the emission of particles, arising from the combustion of fuel shall, when requested by the department, provide such sampling facilities exclusive of instrumentation and sensing devices as may be necessary for the department to determine the rate at which the particles are or may be discharged from the fuel burning operation.

(b) During such testing by the department, the fuel burning operation shall be operated under normal, routine operating conditions or under such other conditions within the capacity of the equipment as may be requested by the department.

(c) The facilities may be either permanent or temporary, at the discretion of the person responsible for their provision, and shall conform to all applicable laws and regulations concerning safe construction and safe practice.

7:27-4.5 Permit to construct, install or alter and certificate to operate

(a) No person shall construct or install any new fuel burning equipment, or any new control apparatus, or alter any existing fuel burning equipment, or any control apparatus without first having obtained a "permit to construct, install or alter control apparatus or equipment" from the department, in accordance with the provisions of subchapter 8 of this chapter.

(b) No person shall use or cause to be used any new or altered fuel burning equipment, or any new or altered control apparatus without first having obtained a "certificate to operate control apparatus or equipment" from the department, in accordance with subchapter 8 of this chapter.

(c) No person shall use or cause to be used any fuel burning equipment unless all components connected, or attached to, or serving the equipment, including control apparatus, are functioning properly and are in use, in accordance with the permit to construct and the certificate to operate.

7:27-4.6 Exceptions

(a) The provisions of this subchapter shall not apply:

1. When the heat input rate to the fuel burning equipment is less

than 1,000,000 British Thermal Units per hour;

2. To marine installations, vehicles or other movable or portable equipment;

3. To direct heat exchangers.